7368

Contract Deliverable
Dave
1.25
PA.19
PA.33

PA-33-4

ROY F. WESTON, INC.
20030 CENTURY BLVD., SUITE 301
GERMANTOWN, MARYLAND 20874
PHONE: (301) 353-1281

February 16, 1989

Mr. William E. Murphie
U. S. Department of Energy
Office of Remedial Action and
Waste Technology, NE-23
Washington, D.C. 20545

Subject: CONTRACT NO. DE-AC01-88NE46125
SITE SUMMARY REPORTS FOR 30 SITES UNDER CONSIDERATION

Dear Mr. Murphie:

Attached are Site Summary Reports for two of the sites currently under consideration for inclusion in FUSRAP. The sites included in this submittal are Tippins Incorporated (formerly the Heppenstall Plant) and the New Jersey Zinc Storage Site.

This submittal satisfies the February deliverable under Task 6 of the subject contract.

If you have any questions or comments regarding this submittal, please contact Ken Wills of the OTS staff.

Sincerely,

L. Ronald Levis

L. Ronald Levis
Project Manager

Enclosure

cc: A. Wallo
J. Wagoner
FUSRAP File

cc w/o enclosure:
R. Woytko

Tippins Incorporated
(formerly Heppenstall Plant)
Pittsburgh, Pennsylvania

Site Function

Correspondence from the period January through April 1955 indicates that the Heppenstall Company performed work under a subcontract with Mallinckrodt Chemical Co. by forging prescribed shapes from over 110,000 pounds of uranium metal dingots. Records indicate that the forging was done on a 1,000 ton press on a schedule of two days per month for approximately six months by a Heppenstall crew of eight men. The salt bath furnace to heat the metal to forging temperatures and a quenching tank was provided to Heppenstall by Mallinckrodt and returned to Mallinckrodt upon completion of the work.

Principal products produced at the plant during that time were steel forgings, die steel and materials handling equipment.

Site Description

The Heppenstall Plant is located at 4620 Hatfield Street, Pittsburgh, Pennsylvania, in the Lawrenceville District. The facility is of substantial size, but uranium handling took place only within a limited area in the north corner of the plant near the powerhouse.

Owner History

Heppenstall owned the facility at the time the work was performed, and continued ownership until 1979. Tippins, Inc., purchased the Heppenstall Plant in 1979. All metal-working equipment contained in the plant, including the forging press and manipulator used to handle uranium metal was sold separately at auction or private sale as part of the liquidation. Reportedly, Tippins never had ownership of that equipment. Furnaces were subsequently dismantled and scrapped.

Radiological History

Health physics services were provided during these periods of operation by representatives of the AEC Health & Safety Laboratory of the New York Operations Office. However, no records have been found that indicate radiological surveys were conducted after the work was completed and the Mallinckrodt equipment was removed from the Heppenstall plant. Representatives from Mallinckrodt and AEC apparently observed the operations and maintained accountability for the uranium metal.

In 1988, the current owner contracted Earth Sciences Consultants, Inc., to conduct an independent radiological survey of the plant. The conclusion of their survey was that the plant had been adequately cleaned after forging operations and that there is no uranium present above the NRC's no-action level of 10 picocuries per gram for soils. All but two samples contained below backround levels of uranium. The higher activity of the two samples above backround was 10 picocuries per gram.

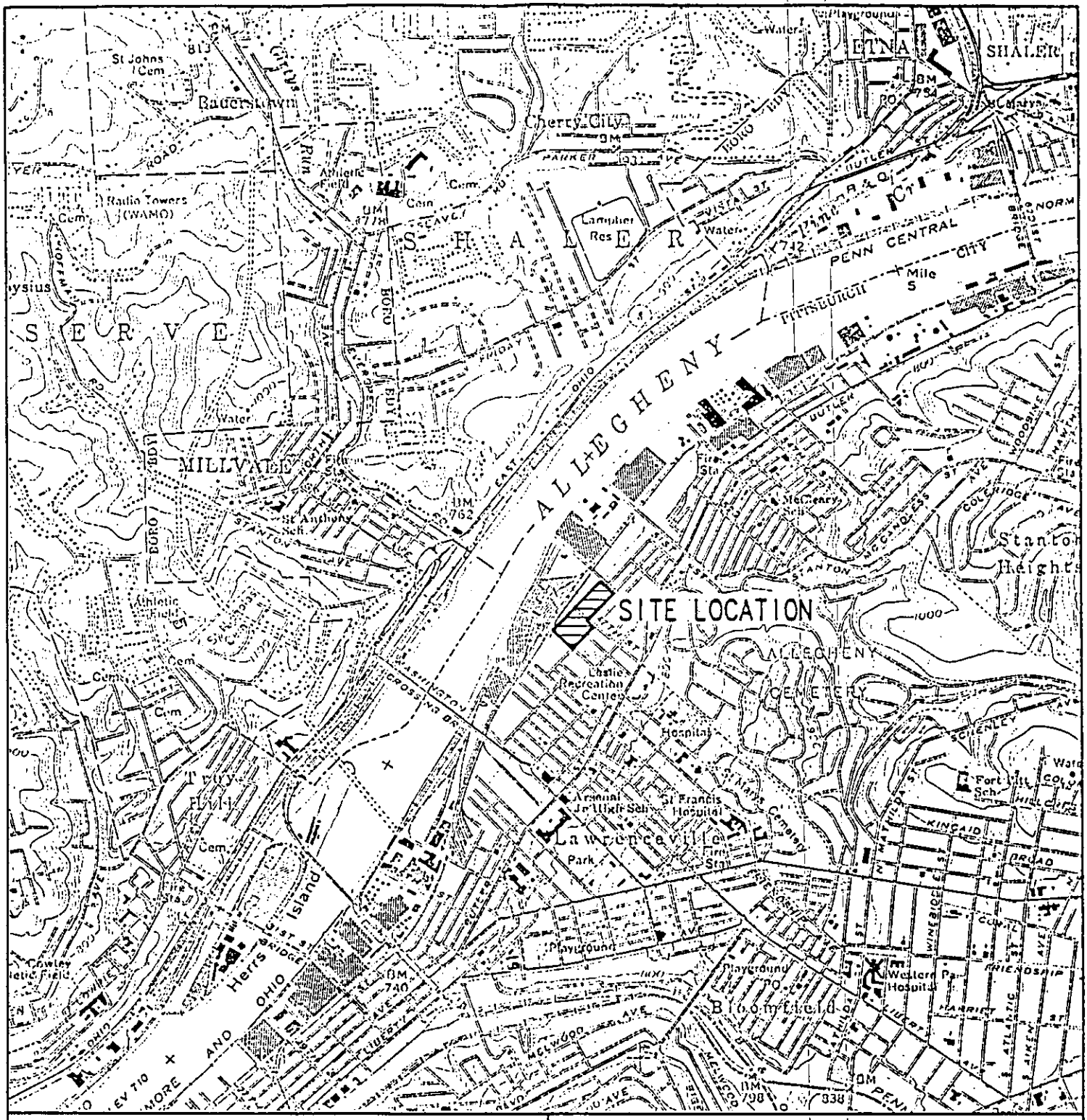

FIGURE 1

HEPPENSTALL PLANT
SITE VICINITY MAP

PREPARED FOR
TIPPINS, INCORPORATED
PITTSBURGH, PENNSYLVANIA

REFERENCE
USGS 7.5 MIN TOPOGRAPHIC QUADRANGLE
PITTSBURGH EAST, PA
DATED 1960, PHOTOREVISED 1969
SCALE 1:24000

APPROVED HLC 1-26-88
CHECKED CJT 1/26/88
DRAWING NUMBER
7333-A1

Earth Sciences Consultants, Inc.

New Jersey Zinc Storage Site
Palmerton, Pennsylvania

Site Function

During the early 1950's, the AEC Division of Raw Materials was implementing a program to identify potential sources of domestic uranium and to encourage commercial mining of uranium ore. Lehigh Coal and Navigation Company contacted the AEC in 1951 to obtain assistance and guidance with regard to the mining of uranium deposits located on their property in Jim Thorpe (formerly Mauch Chunk), Carbon County, Pennsylvania.

Between 1953 and 1954, to support the development of eastern uranium mines and to meet the AEC's goals for procurement and stockpiling of uranium ore, the Division of Raw Materials established an ore stockpile on the property of New Jersey Zinc Company at their smelter and research center in Palmerton, Pennsylvania. The AEC stored about 57 truckloads of ore (about 360 tons) from Lehigh Coal and Navigation Company at the site. The ore averaged about 0.21% uranium oxide. New Jersey Zinc accepted, sampled, and stored the ore as an agent of the AEC. The ore was stored on this property (leased to the Federal government) until 1973.

Site Description

The storage area was located in the Palmerton, Pennsylvania area on New Jersey Zinc, Inc. property. New Jersey Zinc has plants on the west and east sides of Palmerton and offices at Fourth Street and Delaware Avenue in Palmerton. The storage site was located at the East Plant near the zinc smelter and research center.

Owner History

New Jersey Zinc, Incorporated, was the owner of the site at the time the AEC leased the property. The current owner is Zinc Corporation of America.

Radiological History

In 1972 and 1973, as an indirect result of the Grand Junction mill tailings legislation, the AEC initiated a program to evaluate and, where appropriate, clean-up AEC ore storage or stockpile locations.

The site was visited by AEC personnel in January of 1973 for the purposes of characterizing the condition of the site and the material, and identifying options for disposal of the ore. The survey data indicated that the average external exposure gamma rates over the pile were slightly less than 1 mR/hr and peak measurements were on the order of several mR/hr.

The ore was removed from the site in June of 1973 and shipped to the Feed Materials Production Center in Fernald, Ohio, for disposal in the plant's raffinate pits. The AEC set the maximum acceptable residual radioactivity level at 40 microR/hour above backround (which was 20 microR/hr). The post-removal survey completed in July 1973 found all areas of the site within the 60 microR/hour level (40+20). The radon levels in the area were found to be below measured backround.

The action was considered by the AEC Division of Raw Materials and the Division of Operational Safety to be within the defined criteria. Therefore, the site was considered acceptable for release to the owner.

In 1985, a review of the history of the site by FUSRAP personnel indicated that further investigation was needed to determine if the site meets current radiological standards. A preliminary scoping survey was conducted in May, 1988, and a final designation survey was conducted in July, 1988. The Final Survey Report and determination of the need for remedial action will by made in FY 1989.

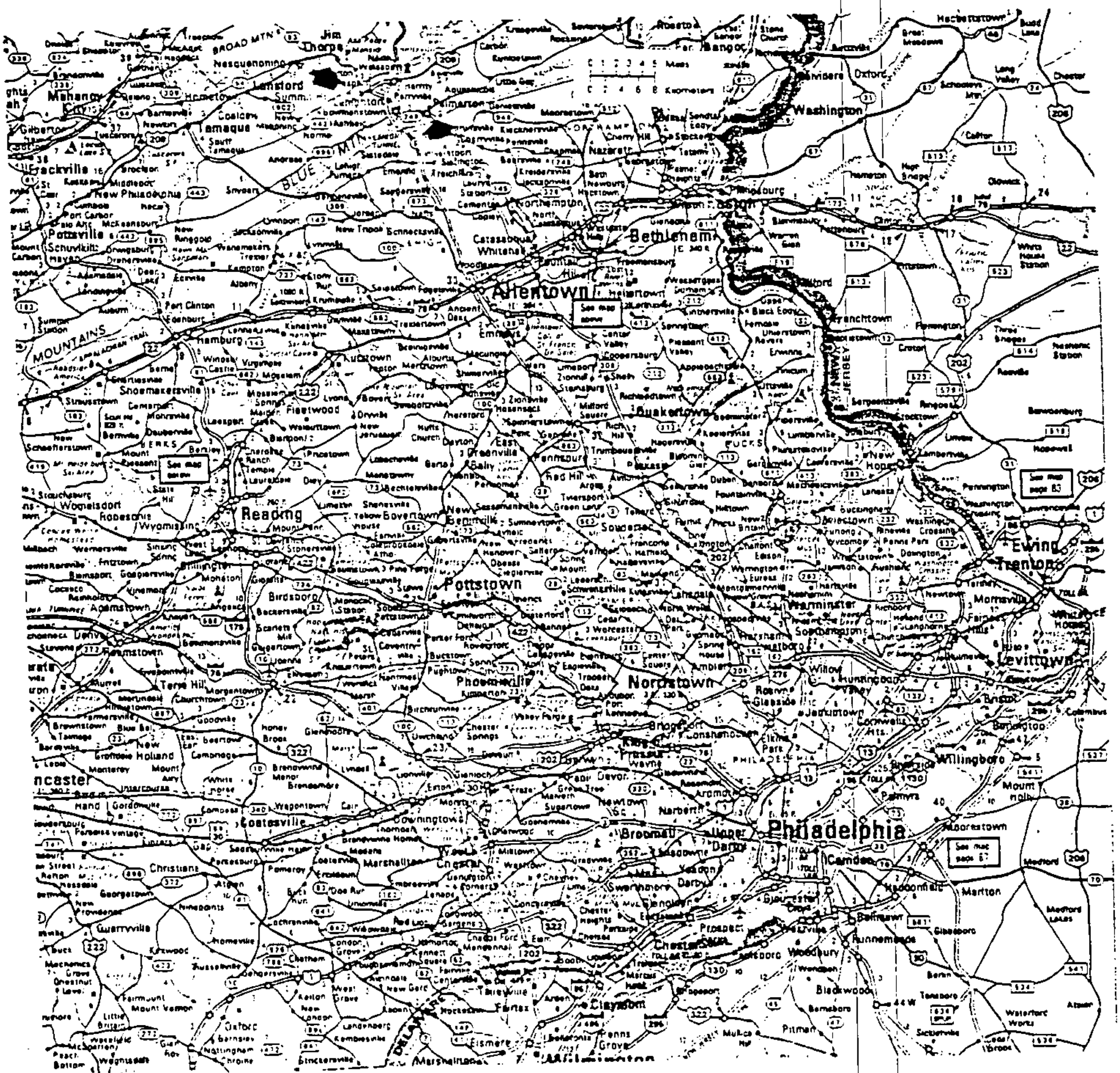

Figure 1. Location of Palmerton and Jim Thorpe

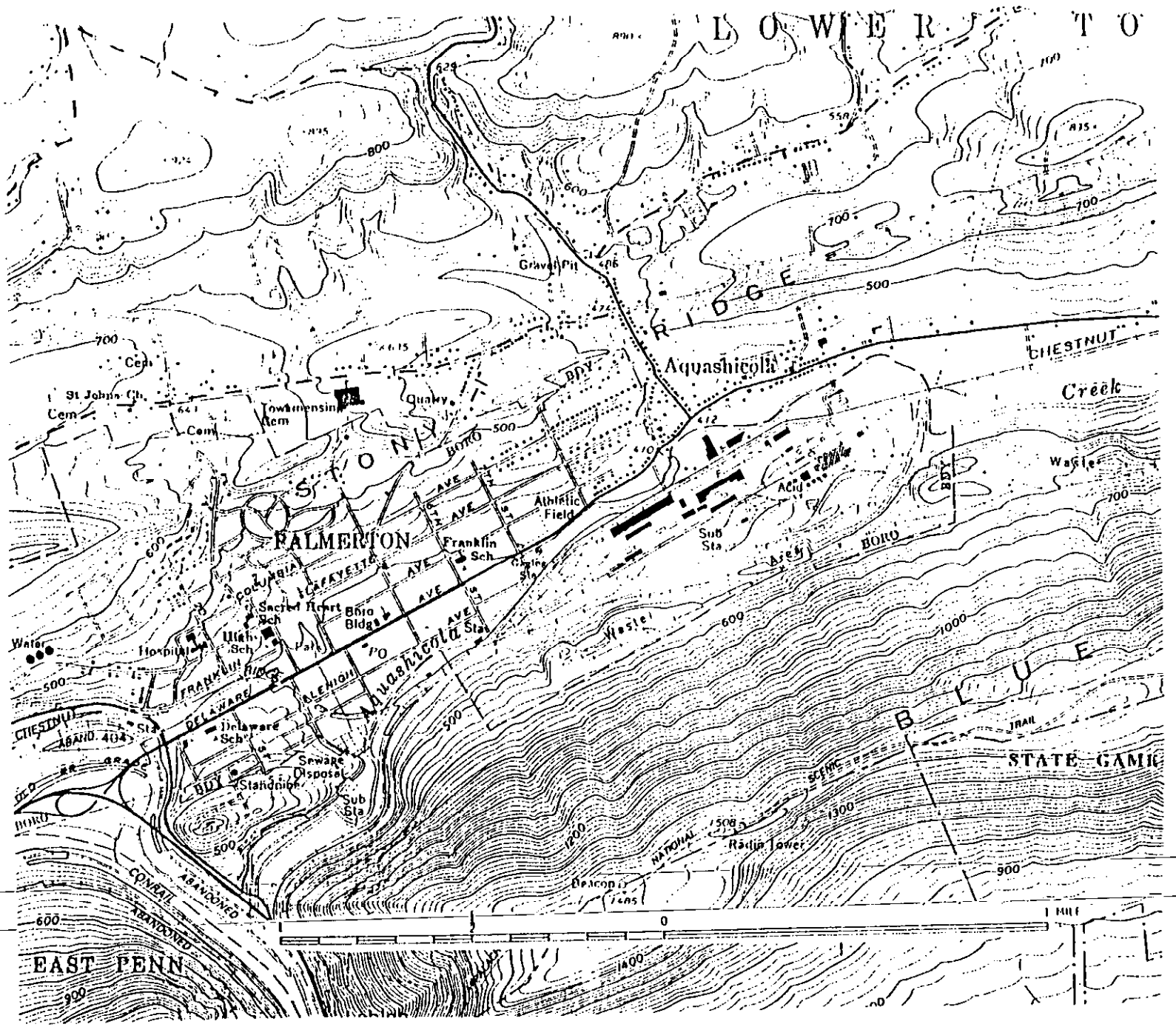

Figure 2. Palmerton, Pennsylvania Area Map